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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/568,621

02/16/2006

Jong Bong Kim

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EXAMINER

JACOBS, TODD D

ART UNIT

PAPER NUMBER

4159

MAIL DATE

DELIVERY MODE

12/09/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/568,621	<b>Applicant(s)</b> KIM ET AL.	
	<b>Examiner</b> TODD D. JACOBS	<b>Art Unit</b> 4159	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35,37-39 and 41-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-35,37-39 and 41-44 is/are allowed.
- 6) ☒ Claim(s) 45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 November 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____.                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                          |

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***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bae et al (6,755,624) in view of Loprete et al (6,132,177).

3. In re claim 45, with reference to figure 1, Bae discloses a dual capacity compressor comprising:

- a power generating part including a reversible motor and a crank shaft inserted in the motor (col 13 line 34);
- a compression part including a cylinder, a piston in the cylinder, and a connecting rod connected to the piston (col 13 line 37);
- a crank pin in an upper part of the crank shaft eccentric from an axis of the crank shaft (col 13 line 39);
- an eccentric sleeve (220) provided between an outside circumferential surface of the crank pin (210), and an end of the connecting rod (33);
- a key member (230) engaged with the eccentric sleeve (220), and the crank pin (210) positively in all rotation directions of the motor;

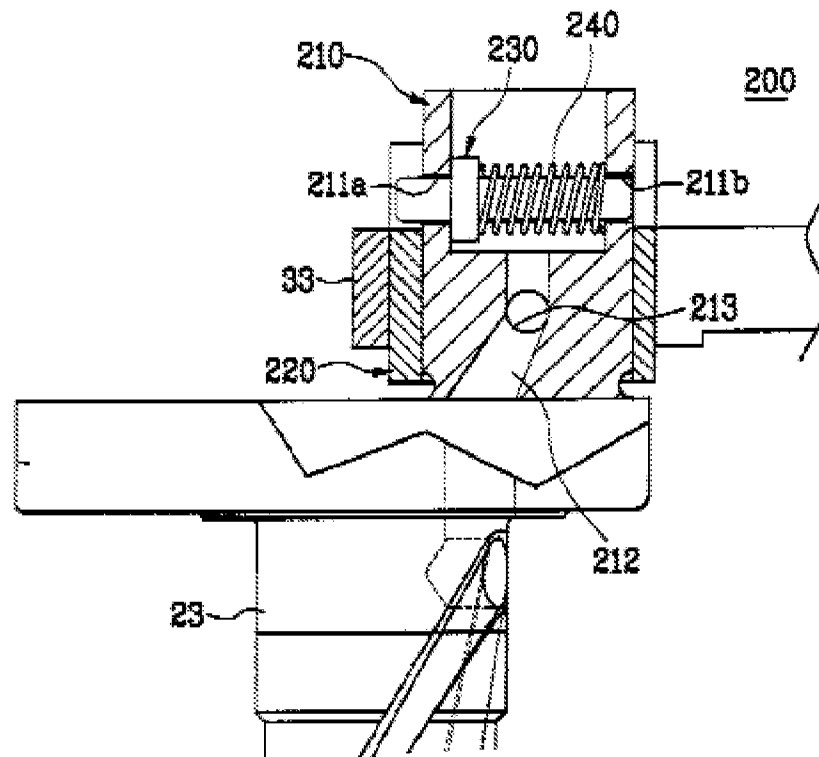
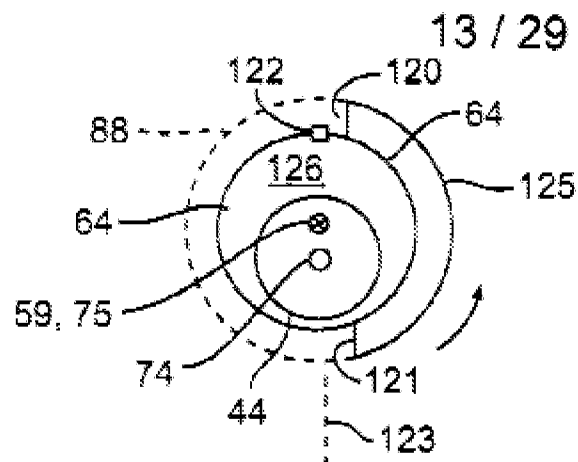


Figure 1

4. However, Bae fails to disclose a balance weight that shifts a center of gravity of the eccentric sleeve to an opposite position with respect to a plane containing both a longitudinal axis of a crank shaft and a longitudinal axis of a crank pin as the eccentric sleeve rotates with the crank pin.

5. Nevertheless, Loprete, with reference to figure 2 below discloses a balance weight (125) that shifts a center of gravity of the eccentric sleeve (126) to an opposite position with respect to a plane containing both a longitudinal axis of a crank shaft (75) and a longitudinal axis of a crank pin (74) as the eccentric sleeve rotates with the crank pin (44). Loprete states on col 17, line 60 states that "The above desired weighted cams can effectively diminish a substantial portion of the destabilizing forces for many compressor constructions and operating parameters."

**Figure 2**

6. Therefore, it would be obvious to one having ordinary skill in the art at the time of the invention to modify Bae in view of Loprete by using the balance weight as discussed above of Loprete with the compressor of Bae in order to effectively diminish a substantial portion of the destabilizing forces for many compressor constructions and operating parameters as taught by Loprete.

***Allowable Subject Matter***

7. Claims 1-35, 37-39, 41-44 are allowed.

8. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not teach or suggest a balance weight that maintains engagement between the key member and the eccentric sleeve as recited in claim 1.

***Response to Amendment***

9. Applicant's amendment with respect to claim 45 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TODD D. JACOBS whose telephone number is (571)270-5708. The examiner can normally be reached on Monday - Friday, 7:30-5:00; Alt. Fridays only.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Nguyen can be reached on 571-272-4491. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TODD D. JACOBS/  
Examiner, Art Unit 4159

/Quang T Van/  
Primary Examiner, Art Unit 3742